

**DETAILED ACTION**

***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

**EXAMINER'S AMENDMENT**

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Thomas J. Bean on May 22, 2008.

The application has been amended as follows:

In the claims:

In claim 9, line 1, please delete the words "...iron or..."

***Allowable Subject Matter***

3. Claims 1-6, 9-14, 17, 20, 21 and 23-40 are allowed.
4. The following is an examiner's statement of reasons for allowance: Claim 9 has been amended to eliminate iron and maintain tin as a dopant. Neither Tsukuba nor the Davos references teach the use of tin as an InP (indium phosphide) dopant. New claim 38 specifies iron as a dopant and an average dislocation density value on a (100) plane, which is perpendicular to said growth direction, is less than  $2500 \text{ cm}^{-2}$ . (See paragraph [0039] of the publication for the present application US 2007/0101924 A. Since InP

crystals which are tin-doped are often utilized as a substrate for the preparation of devices for optical communications, reduction in dislocation density is very important. Tin produces no hardening action with respect to impurities (see, e.g. Japanese Patent Application No. 08-237088) unlike Sulfur and Zinc. Thus, it is difficult to reduce dislocation density. The "average dislocation density less than 5000 cm<sup>-2</sup>", as stated in the instant invention is an important result first available as a consequence of the manufacturing method also disclosed by the applicants.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Felisa Hiteshew whose telephone number is (571) 272-1463. The examiner can normally be reached on Mondays through Thursday from 5:30 AM to 4:00 PM with Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mikhail Kornakov, can be reached on (571) 272-1414. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-1463.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public

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/Felisa C. Hiteshew/  
Primary Examiner, Art Unit 1792